

What is claimed is:

1. A clock supply circuit comprising:

5 a first clock generating circuit for supplying a first clock signal having an almost fixed frequency to a first processing circuit,

a load judgment means for judging a processing load of a second processing circuit, and

10 a second clock generating circuit for variably controlling a frequency of a second clock signal in accordance with a judgment result of said load judgment means and supplying said second clock signal to a second processing circuit.

2. A clock supply circuit as set forth in claim 1, wherein

15 said first processing circuit includes a demodulation processing circuit for demodulating a received signal having a predetermined frequency transmitted through a channel, and generating a bit stream signal,

20 said second processing circuit includes a decoding processing circuit for decoding said demodulated bit stream signal output from said demodulation processing circuit.

3. A clock supply circuit as set forth in claim 1, further comprising a multiplication circuit generating a multiplied clock signal obtained by multiplying a reference clock signal having a predetermined frequency supplied from outside by a predetermined multiplication factor, wherein

said first clock generating circuit includes a first frequency division circuit for dividing said multiplied clock signal by a first frequency division ratio and supplying the divided clock signal as said first clock signal,

said second clock generating circuit includes a second frequency division circuit for dividing said multiplied clock signal by a second frequency division ratio controlled in accordance with a judgment result of said load judgment means and supplying the divided clock signal as said second clock signal.

4. A clock supply circuit as set forth in claim 1, wherein said first processing circuit processing the received signal using said first clock signal, further comprises

a timing compensation means for detecting a timing deviation between said first clock signal and the received signal and compensating the timing of said first

clock signal in accordance with the detection result.

5. A clock supply circuit supplying a processing clock signal for processing an input signal having a predetermined frequency, said clock supply circuit comprising:

a clock generating means generating a intermediate clock signal for processing said input signal, a first clock signal higher in frequency than the intermediate clock signal, and a second clock signal lower in frequency than the intermediate clock signal,

a clock switching means selecting any of the intermediate clock signal, the first clock signal or the second clock signal, supplying the selected one as said processing clock signal to the signal processing, and

a clock switching control means for processing said input signal with use of the selected processing clock signal, detecting an amount out-of-sync of the processing clock signal with respect to the input signal in accordance with the processing result, and controlling the clock switching in accordance with said detected amount out-of-sync.

6. A clock supply circuit as set forth in claim 5, wherein said clock generating means further comprises

an oscillation means generating a reference clock signal having a predetermined reference frequency,

a multiplying means generating a multiplied clock signal obtained by multiplying said reference clock signal, and

a frequency division means for dividing said multiplied clock signal by different frequency division ratios to generate said intermediate clock signal, said first clock signal and said second clock signal, respectively.

7. A clock supply circuit as set forth in claim 6, wherein the clock switching means switches said clock signals using a predetermined time span as a switching time unit wherein at the start and ending time phases of said intermediate clock signal, said first and second clock signals match.

8. A clock supply circuit as set forth in claim 7, further comprises a counter for counting said multiplied clock signal, having a maximum count value set in accordance with a least common multiple of an intermediate division ratio for generating said intermediate clock signal, a first division ratio for generating said first clock signal and a second division ratio for generating said second clock signal, wherein

said clock switching means performs clock switching when the count value of said counter reaches a predetermined value.

5 9. A clock supply circuit as set forth in claim 8, wherein said predetermined value is zero or said maximum count value.

10 10. A clock supply circuit as set forth in claim 5, wherein

15 said clock switching means switches said intermediate clock signal and said first clock signal using a predetermined time span as a first time switching unit wherein at the start and ending time phases of said intermediate clock signal and said first clock signal match, and

20 switches said intermediate clock signal and said second clock signal using a predetermined time span as a second time switching unit wherein at the start and ending time phases of said intermediate clock signal and said second clock signal match.

25 11. A clock supply circuit as set forth in claim 10, further comprises

a first counter counting said multiplied clock signal, having a first maximum count value set in

accordance with a least common multiple of an intermediate division ratio for generating said intermediate clock signal and a first division ratio for generating said first clock signal, and

5           a second counter counting said multiplied clock signal, having a second maximum count value set in accordance with a least common multiple of a intermediate division ratio for generating said intermediate clock signal and a second division ratio for generating said  
10           second clock signal, wherein

          said clock switching means further comprises

          a first switching circuit performing clock switching of the intermediate clock signal and the first clock signal when the count value of said first counter  
15           reaches a first value, and

          a second switching circuit performing clock switching of the intermediate clock signal and the second clock signal when the count value of said second counter reaches a second value.

20           12. A clock supply circuit as set forth in claim 11 wherein

          said first value is zero or said first maximum value, and

said second value is zero or said second maximum value.

5 13. A clock supply circuit supplying a processing clock signal for processing an input signal having a predetermined frequency, said clock supply circuit comprising:

a clock generating means generating a first clock signal and a second clock signal having a lower frequency than that of said first clock signal,

10 a clock switching means selecting any of the first clock signal or the second clock signal, supplying the selected one as said processing clock signal to the signal processing, and

15 a clock switching control means for processing said input signal with use of the selected processing clock signal, detecting an amount out-of-sync of the processing clock signal with respect to the input signal in accordance with the processing result, and controlling the clock switching in accordance with said detected amount out-of-sync.

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14. A clock supply circuit as set forth in claim 13, wherein said clock generating means further comprises

an oscillation means generating a reference

clock signal having a predetermined reference frequency,

a multiplying means generating a multiplied clock signal obtained by multiplying said reference clock signal, and

5 a frequency division means for dividing said multiplied clock signal by different frequency division ratios to generate said first clock signal and said second clock signal, respectively.

10 15. A clock supply circuit as set forth in claim 14, wherein

the clock switching means switches said clock signals using a predetermined time span as a switching time unit wherein at the start and ending time phases of said first and second clock signals match.

15 16. A clock supply circuit as set forth in claim 15, further comprises a counter for counting said multiplied clock signal, having a maximum count value set in accordance with a least common multiple of a first division ratio for generating said first clock signal and  
20 a second division ratio for generating said second clock signal, wherein

said clock switching means performs clock switching when the count value of said counter reaches a



predetermined value.

17. A clock supply circuit as set forth in claim 16, wherein said predetermined value is zero or said maximum count value.